Master Builders in the Insect World

By N. P. D.

FABRE, the French naturalist, died several years ago, more than 90 years old, and his eyes "very tired," as he said. But his vast epic of the insect world was complete before he died, and is now nearing completion in the English edition, translated by Alexander Teixeira de Mattos. *The Mason-Wasps* is Volume IX. of the ten volumes of the *Souvenirs entomologiques*, and is the second volume on wasps. There is nothing more fascinating in fiction than these tales of Fabre telling of the wild orgies of amorousness and murder and cannibalism that go on at night in the sleeping fields and the dusty fallows; tales that once read are forever remembered, and give new and dire significance, and add romance too, to each distinct note in the great outdoor symphony of a warm summer night.

Women, it would seem, should especially enjoy reading Fabre, since in the insect life he describes the female of the species is almost always more deadly than the male, is generally twice as big as the male, rocks the cradle, rules the home, hunts the food for the insect Baby Buntings, and even determines the sex of the offspring; and, in fact, when the offspring is once assured, generally has no more use for the male, and the spider at last serves the poor bridegroom up at his own wedding feast; whereas the Praying Mantis, the hypocritical little cannibal that poses as a nun—well, her habits are too reprehensible and immoral for words!

II.

The passionate desire of humans throughout the ages to determine sex (until more recent years when young ladies embarrass the men by offering for sale "birth control" reviews on the street corners) is the marvellous prerogative of the mason wasps, as well as of some bees, who make the sex conform to the size of the cradle. As a general rule, the females are larger and need more room and more nourishment. Therefore instead of cruelly lopping off her offspring as Procrustes his victims to fit the bed, the mason wasp lays either a male egg or a female egg as she pleases—males for the shallow cells and females for the deep cells.

How does she do it? That is a question Fabre does not presume to answer. Like the artist who paints what he sees, he tells what he sees. He reports the results of his own observations. In his younnger days, when he had a great longing for books, he says, he could not get them; when he might have had them he no longer wanted them. He did not claim to know much about modern scientific views. Especially, and this was long before the war, he had no use for the German scientists. Quoting a German on this optional assessment of sex among the bees and the wasps, he said: "Coming from Germany, this theory cannot but inspire me with profound distrust." He disagreed, of course, with his "learned friend Erasmus Darwin," over their opposing theories of instinct and intelligence in the animal world, and returns to the argument in this volume, as in its predecessors.

He gives an example of the almost idiotic instinct of the mason wasp, similar to that of the mason bee, or of the celebrated maternal instinct of the Lycosa spider, which lovingly and with seeming intelligence exposes its little sac of eggs to the vivifying sun, turning and turning again, only to do the same with a substituted pellet of paper. The mason bee is accustomed to building, victualling, laying the egg and closing the cell in a regular order of rotation; so that if a finished home is put in the place of a partially completed home it will go on building just the same. If she is masoning, she keeps on masoning; if she is storing, she keeps on storing. Nothing will induce her to lay aside the pollen brush or the trowel the end. It is ignorant of its wonderful talents, just as the stomach is ignorant of its skilful chemistry. . . . Experience does not reach it; time does not awaken a glimmer in the darkness of its unconsciousness. Its art, perfect in its specialty, but inept in the face of the slightest new difficulty, is handed down immutably, as the art of the suction pump is handed down to the babe at the breast."

The hunting wasp may have had a distinguished talent for surgery and for wielding the lancet, as we learned in the preceding volume, but compared with the architectural genius of the mason wasp (which puts our skyscraper wizards to shame) he is a miner, or navvy, as Fabre says, and his home is a hole in the ground as contrasted with the towered and turreted mansion of the other. The hunting wasps use the pick for loosening, the crowbar for shifting, the rake for extracting materials, but never the trowel for laying. The Eumenes, on the contrary, are real masons and artists, who build their houses bit by bit with carefully selected stones and mortar made out of dust and saliva, until she has stored or trowelled the usual amount.

The mason wasp is similiarly exposed by Fabre, by removing the eggs and the living provender of spiders from the bottom of the cell. What does the mason wasp do?

"The Pelopæus goes on storing spiders for an egg that has been removed; she perseveres in making hunting trips that are henceforth useless; she hoards victuals that are destined to nourish nothing; she multiplies her battues to fill with game a larder which is forthwith emptied by my tweezers; lastly, she closes with every customary care a cell that no longer contains anything whatever: she sets her seal on emptiness. She does even absurder things: she plasters the site of her vanished nest, covering an imaginary structure and putting a roof to a house which at the moment is tucked away in my pocket."

III.

Constrained by the "inexorable logic of the facts," Fabre says he is compelled to state the following deductions:

"The insect is neither free nor conscious in its industry, which in its case is an external function with phases regulated almost as strictly as the phases of an internal function, such as digestion. It builds, weaves, hunts, stabs and paralyzes, even as it digests, even as it secretes the poison of its sting, the silk of its cocoon or the wax of its combs, always without the least understanding of the means or and round the whole off into a cupola and finish with a neck as graceful as an Etruscan vase. Observing the home building of the mason wasps, Fabre is almost willing to admit that these insects have a knowledge of æsthetics.

The Mason-Wasps is as interesting as the eight volumes that have preceded it and the one that will come after. Like the other volumes also it is as interesting for the glimpses it gives of Fabre himself and his Provencal home at Serignan, as for the entomological lore. We recall a picture of him in one of the previous volumes sitting all day long by the roadside, observing a single spot so intently that the peasant women, having observed him in the morning, returning from their work at night and seeing the old man sitting in the same place and looking at the same spot would say "Poor innocent (idiot), but harmless"—and cross themselves as they proceeded on their way. In this volume, Fabre, kneeling in the hot and dusty road, represents his dog lolling in the shade as saying to him: "What are you doing over there you booby, baking in the heat? Come here under the foliage; see how comfortable I am." But the man is patiently endeavoring, after many failures, to remove from the bottom of the wasp cell the hanging egg, suspended by a thread so delicate it can only be seen with a magnifying glass. No wonder old eyes are tired. But he is finally successful, and again the peasant women might murmur "idiot" and cross themselves, as he is seen walking home "with the stiffness of an automaton, all of one piece, with steps methodically calculated." For the thread that can only be seen with a magnifying glass must not be broken.

IV.

Fabre admits it would be idiotic to inquire so minutely into the lives of insects as he has done if out the chaos of his observations he did not get a few gleams of light on the "loftiest problems" mankind is permitted to discuss: What is life? What is human intelligence? What is instinct?

His own life held as much romance and tragedy as that of the teeming world he describes. He was born a peasant, the son of a small farmer and cowherd. He was self-educated. At one time he earned his school fees by serving mass in the cathedral; at another period he went to school to his godfather, who was also barber, bellringer and singer in the choir. He was a school teacher for twenty-five years, never receiving more than $300 a year, and knowing the pinch and struggle of poverty. He read a book by the French naturalist, Leon Dufour, about a wasp that hunted Buprestis beetles. He was fired to write a supplementary study about the hunting wasps, which received honorable mention from the Institute of France and a prize for experimental physiology, and best of all a letter from the "revered master" himself. "Even now," he wrote in his old age, "at that sacred recollection my old eyes fill with happy tears. O fair days of illusion, of faith in the future, where are you now?"

Fabre did his work alone, unaided except by his family, and for many years unrecognized, living in his remote Provencal home. In conducting his entomological studies he had few of the modern laboratory and scientific aids to investigation. Yet he has told the story of the insect world more clearly, more completely, and assuredly more thrillingly, than it has been told before. His life and his work are equally inspiring, and these monumental *Souvenirs entomologiques* must be reckoned among the master works of our time.

THE MASON-WASPS. By Henri Fabre. Translated by Alexander Teixeira de Mattos. Dodd, Mead & Co. $1.75.

The Child

Written in honor of Charles Kingsley, who was born June 12, 1819, and wrote "The Water Babies."

By BENJAMIN DE CASSERES.

ALL children are poets. Their minds are wells of fancy. Their little heads are fairy caves. Their eyes are windows of a palace of magic delights.

They do not see the world as it is, but as they wish it. A house is not a house, but the abode of a goblin or a fairy.

Strange beings dwell in everything. Everything has a soul, and you cannot make a child believe otherwise. His imagination creates life where life is not.

Children relate the most extravagant stories with an air of truth. It is their truth. To them their dreams and visions are the only realities. They have no use for a cheerless, stupid fact. Their minds carry a finer secret.

Yes, a secret! A great secret!

They live in a Kingdom of Secrets which we older ones, world weary and task laden, can never enter.

They—the smiling children with the dreamy faces—have the key to the door of Truth. It is they who see behind the masks that things wear; it is their newer souls that see things truly.

The craving for tales of adventure, for romance, the thirst for fiction of all kinds are our attempts to force entrance again into that Palace of Endless Delight—to recapture the mood of the child.

'The Ambassador's Trunk'

A GREAT many foolish things happen in official circles in Washington these days, but none more so than when the Secretary of State took a paper on which the fate of the world rested out of his official safe and gave it to Capt. Vance Prescott to carry out to the country home of Prof. Francis Vernon Fourth Assistant Secretary of State, for security's sake. It appears that there were doubtful characters even in the State Department. A lot of people seemed to know about the existence of this highly important paper, for one villain tried to pick Capt. Prescott's pocket in the streets of Washington and another waylaid him for the same purpose between the station and Prof. Vernon's house.

On the principle that the obvious hiding place is the most secure, Vernon put the document in a cellaret in his private room, from which it was abstracted by one of the house guests at the instigation of Count Castor, "a South American diplomat." That suave person put the paper in the trunk of the Russian Ambassador that chanced to be waiting for the expressman, and Capt. Prescott and Bromley Barnes, a secret service man of distinction, set out to recover possession of the paper. You read these things in George Barton's *The Ambassador's Trunk*, but you do not get as excited over them as you might for the simple reason that the adventures of the pair of detectives are so palpably artificial. Of course the paper is "saved," but in a manner that is of a piece with all the manufactured devices of this tale.

THE AMBASSADOR'S TRUNK. By George Barton. Boston: The Page Company. $1.50.